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ABSTRACT

Significant discrepancies between ideal and real methods of needs assessment need to be rectified. Essential principles for managing an educational assessment have been set down by recognized educators. Experts' recommendations include such requirements as using a clear definition of need (as opposed to want), precise quantifiable methods, an inductive approach, and both "soft" and "hard" data. A 1977 study of national local education agencies, state education agencies, and commercial organizations indicates that these recommendations are not always followed. The discrepancies between the theoretical principles and actual practice suggest some corrective measures. (1) Needs assessment should be a continuous process. (2) A clear definition of need (as opposed to want) should be formulated along with precise quantifiable methods of need identification. (3) A clear distinction between nonacademic and academic needs should be made. (4) More experimentation with the inductive approach should be performed. (5) Needs assessment studies should be multicultural and multilingual where appropriate. (6) The technical quality of survey instruments should be improved. (7) Needs identified through questionnaires should be validated with statistical data. (8) More sophisticated analysis methods for the measurement of needs should be considered. (Author/JM)

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NEEDS ASSESSMENT IN EDUCATION:

MORE DISCREPANCY THAN ANALYSIS

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INTRODUCTION

Educational needs assessment studies normally seek to determine discrepancies that may exist between two states of affairs: (a) the current status of a group of student learners or of an institutional agency and (b) a desired or required status. The difference between these two conditions is commonly referred to as the "need" that should be addressed and reconciled.

Borrowing and applying that formula, this paper will briefly discuss two states of affairs with respect to the methodology of determining educational needs and the discrepancies that exist between them: (a) the current needs assessment practices of numerous state and local educational agencies and commercial organizations and (b) the theoretical perspectives and guidelines for conducting needs assessments as proposed by selected educational planners and administrators. The reader will find significant differences often occurring between theory and practice, and thus it may be alleged that there exists a need for addressing and rectifying these discrepancies and for bringing actual needs assessment practices more into conformity with a desired state of affairs.

This paper is subdivided into four sections: (1) the first presents the views of several recognized educators on essential principles for managing an educational needs assessment; (2) the second discusses in a greatly abbreviated format the results of a study conducted on current approaches of educational agencies for determining needs; (3) the third identifies some major discrepancies between these perspectives and actual

practices of many educational agencies; and (4) the fourth endeavors to draw conclusions and list suggestions through which these discrepancies may be remedied.

I. NEEDS ASSESSMENT THEORY

OR, WHAT SHOULD BE

Assessments of educational needs, as we know them, have been conducted by state, local, and commercial agencies since the mid 1960's and scholarly reports and discussions on methodology have also appeared in the literature since then (e.g., ETS, 1965; Sweigert, 1968; Kaufman, Corrigan, and Johnson, 1969; and Kaufman and Harsh, 1969). However, Kaufman's presentation on determining educational needs in Educational System Planning in 1972 is generally recognized as one of the early standards for operational definitions and procedural guidelines. Many subsequent publications have modified or expanded upon Kaufman's approach, but most acknowledge the primacy of his work. Thus, the impact of Kaufman's perspectives can be expected to be seen in the conduct of needs assessments by educational agencies within the past five years.

According to Kaufman, a needs assessment is a discrepancy analysis that identifies two polar positions--where we are now, and where we are to be--and specifies a measurable discrepancy or distance between these poles. It is not simply a goal-setting process wherein only the importance of prescribed goals is rated via some questionnaire instrument. Kaufman does acknowledge the value of opinions and other subjective information in the determination of needs, but he strongly encourages the collection of precise, quantifiable data in the measurement of this difference between goals and actualities. With Harsh (Kaufman and Harsh, 1969) he postulates the existence of three models: the inductive, the deductive,

and the "classical." Simply stated, in the inductive model, which Kaufman moderately advocates, existing conditions are evaluated prior to the development of goals so that the subsequently identified needs may be more relevant to an educational agency's overall objectives. In the deductive approach, goals are first determined, and then needs are derived by measuring the discrepancies between existing conditions and these goals. Kaufman dismisses the "clasical" model as having little value in the assessment of need. Kaufman also addresses the distinction between "needs" and "wants" but not as thoroughly as later writers. He proposes that this dilemma can be resolved by carefully defining needs, by relying on "what is required" and not "what is desired" to satisfy a discrepancy, and by using precise, quantifiable measures.

More recent studies of needs assessments likely have not been in publication long enough to have an impact on current educational practices, but these perspectives show the direction in which this evaluative process is proceeding. Witkin's NIE sponsored study (1975) analyzes the practices of selected educational agencies and discusses various procedures for identifying, describing, and prioritizing discrepancies between goals and present conditions. She advocates a balance in the use of "hard" and "soft" data for measurement and proposes the formulation of logical, statistically based decision rules for need determination.

Stufflebeam (1977) presents four different perspectives on the definition of need: (1) the discrepancy view--the difference between desired and observed performances; (2) the democratic view--a change desired by a majority of some reference group; (3) the diagnostic view--

something whose absence or deficiency proves harmful; and (4) the analytic view--the direction in which improvement can be predicted to occur. He emphasizes the importance of having a clearly formulated purpose and design prior to implementing the process or collecting information.

Roth (1977) and Scriven and Roth (1978) discuss the confusion that can result when wants are mistakenly used as indicators of needs, and they present an alternative definition of need.

> "A needs X" means A is or would be in an unsatisfactory condition without X in a particular respect, and would or does significantly benefit from X in that respect; thereby moving towards or achieving but not surpassing a satisfactory condition in this respect.

For them a "need stops and wants begin just at the level of adequacy." Roth refines this level of adequacy concept by indicating that discrepancies between actual conditions and goals may be expressed in terms of minimal needs (essential discrepancies), normal needs (social discrepancies), or ideal needs (goal discrepancies). It is presumed that the agency conducting the assessment will be able to define explicitly its purposes and collect valid and quantifiable data so that it can determine when identified discrepancies are within and do not exceed a given level of adequacy. With respect to the use of standardized test data in the determination of needs, Scriven and Roth caution the user that he will be obtaining data relative to performance needs (i.e., performance discrepancies) and that he should not presume performance needs are equivalent to treatment needs (i.e., procedures to remedy performance needs). Needs assessment studies, they maintain, must also determine treatment needs so that the most effective treatment approach can be implemented.

II. NEEDS ASSESSMENT PRACTICES OF EDUCATIONAL AGENCIES

OR, WHAT IS

In the fall of 1977 the Center for Evaluation and Research at Rhode Island College under contract to the Rhode Island Department of Education (RIDE) conducted a study into the needs assessment methodologies of selected state and local educational agencies and commercial organizations. The intent of the study was to develop a short compendium of models and/or instruments which could be replicated by local school districts participating in RIDE's Local Planning and Assessment Process. Seventy-three sources (32 SEAs, 25 LEAs, and 16 commercial organizations) were initially contacted and interviewed via telephone conversations. In 1978 a follow-up questionnaire was mailed to the remaining state agencies and to additional local agencies. These LEAs were selected from major population centers in the United States on the presumed high probability for involvement with needs assessment activities.

This paper makes no attempt to describe in detail the various processes of the responding agencies. For a thorough analysis of selected educational agencies, the reader is directed to Belle R. Witkin's report, "An Analysis of Needs Assessment Techniques for Educational Planning at State, Intermediate, and District Levels" (ERIC: ED 108 370). Moreover, because of incomplete returns and because of a wide variation in needs assessment procedural techniques, this paper will not present any exact statistics to describe the data collected from the responding agencies. Primarily, this section of the paper discusses the methodology of educational

agencies in general terms, identifying common practices and citing examples of special merit. The following list summarizes the most prominent findings of the study.

1. Both state and local educational agencies have the same fundamental reasons for conducting needs assessments: Identification of problem areas and prioritization of educational goals. In addition, SEAs participating in this study indicated that other reasons include compliance with state laws and the solicitation of public opinion. On the other hand, LEAs noted that the needs assessment process was just one step in an overall evaluation effort and that these assessments were frequently made so as to determine the allocation of funds.

2. Less than twenty percent of the responding SEAs and LEAs participating in this study indicated that they are totally reliant on external agencies for the development of educational goals. However, when the goals are derived from outside sources, they often are taken verbatim from those prepared by commercial organizations or from those mandated by a state agency.

3. More than eighty percent of educational agencies conduct a deductive needs assessment. That is, educational goals are first formulated; then information is collected relative to the attainment of these goals; and finally discrepancies between goal importance and goal achievement are determined.

4. Comparatively few agencies determine needs inductively. In this procedure, data on the current state of affairs are first collected; next goals are set; and then discrepancies are measured. The inductive approach

has an advantage in that the goals established may be more relevant to existing conditions. The Fresno County Needs Assessment Process, the Dallas Independent School District Planning Model, the Worldwide Education and Research Institute Model, and the Alameda County Needs Assessment Model all provide examples of the inductive methodology.

5. Most of the assessment studies (more than 70 percent) attempt to determine student learner needs and institutional needs through separate instruments. Basic skills areas and vocational awareness are the most noted curricular areas measured with respect to student needs while resources/instructional materials, support services, environmental conditions, and program staffing in that order are the focus of studies concerned with institutional needs.

6. Approximately one quarter of the "needs assessments" of the responding local school districts do not measure needs. Rather, because an index of goal importance is all that is provided, these instruments can be used only to establish priority educational goals, not to determine needs.

7. Survey questionnaires are distributed in more than 70 percent of assessment studies, whereas only about one of three assessments utilize both "soft" and "hard" data. SEAs tend to rely on standardized tests as indicators of need more than LEAs. Less than ten percent of the responding agencies make use of locally developed criterion-referenced measures to ascertain student needs.

8. Better than seventy percent of educational agencies calculate needs via a simple numerical process, usually no more than the difference

between arithmetic means on Likert-type scales. Relatively few assessments require measurement approaches such as card sorts, budget allocation procedures, forced choice methods, or magnitude estimation scaling.

9. Nearly all of the assessment studies focused upon the current state of affairs within the state or district for the determination of needs. Notable exceptions to this concern for present conditions are the Atlanta Assessment Project and the Dallas-Fort Worth Skyline Wide Educational Plan. Both of these studies sought to determine needs for the students and schools of the 1980's or beyond.

10. Less than ten percent of the educational agencies which distribute questionnaires to the general public have prepared non-English versions.

11. About twenty percent of the responding agencies have experimented with some form of Delphi technique for arriving at a consensus.

12. Several needs assessment kits which provide detailed directions for conducting needs assessment studies have been produced by commercial organizations. The more complete kits include The Center for the Study of Evaluation Elementary School Evaluation Kit: Needs Assessment marketed by Allyn and Bacon, the Pupil-Perceived Needs assessment Package from Research for Better Schools, and the Workshop Packet for Educational Goals and Objectives of Phi Delta Kappa.

III. DISCREPANCIES BETWEEN THEORY AND PRACTICE

OR, THE NEEDS OF NEEDS ASSESSMENT

In perusing the first two sections of this paper, the reader cannot help but to notice discrepancies that exist between the theoretical perspectives of the cited educators and the actual practices of educational agencies. This section proposes to identify some of the more significant of these inconsistencies and comment briefly on other problems as well. This listing is selective and not comprehensive.

1. When subjective data are collected, the resulting assessment usually measures the "wants" of the respondents and not true "needs." Kaufman (1972) and later Scriven and Roth (1978) have shown that wants and needs may differ; however, the assessments which ask their respondents to determine the "desired" state of goal achievement commonly do not make this discrimination.

2. Many assessment projects seem to be implemented without a clear definition of the term "need." For example, if the study focuses on student learner needs, there may be no indication of whether the needs are to be determined with respect to minimum student performance for age level, normal performance, or optimal performance.

3. Moreover, because of the lack of a clear definition of need, there may be no precise, quantifiable method for defining the degree or extent of an identified need. Even though simple calculations are used to indicate a numerical difference between "what is" and "what should be," in reality school administrators often have no practical method for

determining how much more must be added to the current status of affairs to satisfy that need. This problem approximates the Scriven and Roth (1978) position on the difference between measuring performance needs and treatment needs.

4. Some assessments conduct no discrepancy analysis but rather simply ask their participants/respondents to rate or identify important educational goals. Thus, these processes are not true needs assessments but are actually only procedures for setting goals.

5. Many agencies place complete reliance in the appropriateness of a set of educational goals which are obtained from external sources. Thus, conducting what Kaufman labeled as a deductive needs assessment, these agencies may eventually realize that some of the goal statements are inappropriate for their agencies and that the subsequently identified needs are actually irrelevant.

6. Needs assessments are frequently conducted as one-shot activities with no attempt to follow up on the results either to attest to their reliability or to determine changes over time.

7. Many assessment studies suffer from basic measurement faults because of the absence of adequate field testing, validity in the design of instruments, proper sampling procedures, reliability checks, or appropriate statistical analysis methods.

8. The goals being measured are often too broadly stated. Consequently, the perceptions of the participants/respondents may be ambiguous because of a wide latitude in interpretation.

9. When standardized testing data are employed, most agencies rely entirely on results obtained through norm-referenced tests. Very few

agencies have developed local criterion-referenced standards on which to base their analyses.

10. Needs are commonly determined through a simple numerical rating system. Often a five-point Likert-type scale is used although the procedure does not really yield ratio data for computation.

11. The perceptions of questionnaire respondents are frequently not validated with the use of "hard" data. Moreover, because respondents from the general public are usually not aware of any specific constraints that may be affecting an educational agency, their perceptions are often uninformed and not useful.

12. When assessments collect both "soft" and "hard" data relative to goal importance and achievement, educational agencies often do not synthesize these data. Decision rules and guidelines for analyzing disparate data, when present, are usually overly simplistic.

IV. CONCLUSION

Scriven and Roth (1978) note that needs are context-dependent and must be determined within relative frames of reference. In much the same way needs assessments are context-dependent, and theoretical perspectives presuming ideal conditions will often be abandoned in the real world of teacher union restrictions and Proposition 13's in which educational agencies operate. On the other hand, political or fiscal constraints should not justify the "quick and dirty" approach to needs determination which often produces shoddy studies conducted for the wrong reasons and yielding invalid results. The following is a list of some simple maxims based on the research presented in this paper and is intended to provide assistance when planning and conducting a needs assessment.

1. Needs assessment is a continuing process that should be employed during each planning-development-implementation-evaluation-revision cycle of a program. It is a means for obtaining data that is most advantageous when used frequently. Educational agencies should not see the conduct of needs assessment studies as one-time-only procedures.

2. Prior to initiating a needs assessment activity, an educational agency should formulate clear, measurable definitions of "need" and of the process by which these needs will be determined. In this way, it may be more likely that valid educational needs will be derived and not the unrealistic desires or wants of special interest groups. Moreover, it is also important that needs be identified through precise, quantifiable methods so that the degree or level of treatment required to remedy the needs can be determined.

3. Educational agencies should consider determining whether it is their responsibility to meet each of the perceived needs. This question is especially pertinent with non-academic needs that may best be addressed in the home or through religious or social organizations.

4. More research and experimentation with the inductive approach to conducting needs assessments ought to be performed. When student behaviors are evaluated prior to the establishment of educational goals, the relevance of these goals will be enhanced and thus the results of the study will likely be more valuable.

5. Where appropriate, needs assessment studies should reflect the multicultural, multilingual concerns of the community.

6. The technical quality of survey instruments should be improved. Prior to their administration, basic measurement principles should be followed to insure their validity; the instruments should be field tested to eliminate flaws in their design; and in time their reliability should be demonstrated. It is also essential to employ proper sampling procedures.

7. "Needs" that are identified through survey questionnaires should be validated with statistical and/or test data. If possible, both soft and hard data should be utilized in the determination and prioritization of needs. Respondent perceptions may be appropriate for measuring the attainment of some institutional process goals, but test data should also be employed with student learning goals. In addition, program management and evaluation techniques such as PERT and Fault Tree Analysis may assist in the verification of needs.

8. More sophisticated statistical analysis methods for the measurement of needs should be considered. Simple numerical computations involving Likert scales are too prone to respondent biases. Procedures such as magnitude estimation scaling which yields both ordinal and ratio data can be most useful for the interpretation of information.

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